

IN THE CLAIMS

Amend the claims as follows.

Claims 1-64 (Canceled).

65. (Previously Added) An isolated DNA which is *Neisseria meningitidis* (Nm) specific and hybridizes on a Southern blot to a DNA sequence of Nm strain Z2491 and does not hybridize on a Southern blot to a DNA sequence of *Neisseria gonorrhoeae* (Ng) strain MS11, under the following hybridization conditions: 16 h at 65°C, with NaPO₄ 0.5 M, pH 7.2; EDTA-Na 0.001 M, 1%, 1% bovine serum albumin and 7% sodium dodecylsulphate, followed by at least two washes in a solution comprising Na PO₄ 40 mM pH 7.2/EDTA 1 mM/SDS 1%, the final wash being conducted at 65°C for 5 minutes, provided that said DNA or the complement of said isolated DNA is not IS1106 (accession number Z11857), *frpA*, *frpC*, *opc*, *porA*, a glutathione peroxidase encoding gene, and a gene involved in the biosynthesis of any one of the polysaccharide capsule, or rotamase,

said DNA being within an islet involved in the colonization of the nasopharynx or invasion of the submucousal space or systemic dissemination.

66. (Previously Added) An isolated DNA which is *Neisseria meningitidis* (Nm) specific and hybridizes on a Southern blot to a DNA sequence of Region 2 of Nm strain Z2491 and does not hybridize on a Southern blot to a DNA sequence of *Neisseria gonorrhoeae* (Ng) strain MS11, under the following hybridization conditions: 16 h at 65°C, with NaPO₄ 0.5 M, pH 7.2; EDTA-Na 0.001 M, 1%, 1% bovine serum albumin and 7%

sodium dodecylsulphate, followed by at least two washes in a solution comprising Na PO₄ 40 mM pH 7.2/EDTA 1 mM/SDS 1%, the final wash being conducted at 65°C for 5 minutes,

provided that said DNA or the complement of said isolated DNA is not IS1106 (accession number Z11857), *frpA*, *frpC*, *opc*, *porA*, and a gene involved in the biosynthesis of any one of the polysaccharide capsule, rotamase,

said DNA being within an islet involved in the colonization of the nasopharynx or invasion of the submucosal space or systemic dissemination.

67. (Previously Added) The isolated DNA or complement of claim 66 wherein said Region 2 is a DNA which encodes an amino acid selected from the group consisting of SEQ ID NOs: 37-45.

68. (Previously Added) An isolated DNA which is *Neisseria meningitidis* (Nm) specific and hybridizes on a Southern blot to a DNA sequence of Region 2 of Nm strain Z2491 and does not hybridize on a Southern blot to a DNA sequence of *Neisseria gonorrhoeae* (Ng) strain MS11, under the following hybridization conditions: 16 h at 65°C, with NaPO₄ 0.5 M, pH 7.2; EDTA-Na 0.001 M, 1%, 1% bovine serum albumin and 7% sodium dodecylsulphate, followed by at least two washes in a solution comprising Na PO₄ 40 mM pH 7.2/EDTA 1 mM/SDS 1%, the final wash being conducted at 65°C for 5 minutes,

provided that said DNA or the complement of said isolated DNA is not IS1106 (accession number Z11857), *frpA*, *frpC*, *opc*, *porA*, and a gene involved in the biosynthesis of any one of the polysaccharide capsule, rotamase, said DNA encoding a peptide localized beyond the cytoplasmic membrane.

69. (Previously Added) An isolated DNA which is *Neisseria meningitidis* (Nm) specific and hybridizes on a Southern blot to a DNA sequence of Region 4 of Nm strain Z2491 and to a DNA sequence of MS11 and does not hybridize on a Southern blot to a DNA sequence of *Neisseria lactamica* (NI) strain NI8064, under the following hybridization conditions: 16 h at 65°C, with NaPO₄ 0.5 M, pH 7.2; EDTA-Na 0.001 M, 1%, 1% bovine serum albumin and 7% sodium dodecylsulphate, followed by at least two washes in a solution comprising Na PO₄ 40 mM pH 7.2/EDTA 1 mM/SDS 1%, the final wash being conducted at 65°C for 5 minutes, or the complement of said isolated DNA,

provided that said DNA or the complement of said isolated DNA is not *pilC*, a gene involved in the biosynthesis of any one of the polysaccharide capsule, IgA proteases, pilin, a protein which binds transferrin or lactoferrin or an opacity protein,

said DNA being within an islet involved in the colonization of the nasopharynx or invasion of the submucosal space or systemic dissemination.

70. (Previously Added) The isolated DNA or complement of claim 69, said DNA sequence of Region 4 hybridizing with SEQ ID NO: 95.

71. (Previously Added) An isolated DNA which is *Neisseria meningitidis* (Nm) specific and hybridizes on a Southern blot to a DNA sequence of Region 4 of Nm strain Z2491 and does not hybridize on a Southern blot to a DNA sequence of *Neisseria gonorrhoeae* (Ng) strain MS11, under the following hybridization conditions: 16 h at 65°C, with NaPO₄ 0.5 M, pH 7.2; EDTA-Na 0.001 M, 1%, 1% bovine serum albumin and 7% sodium dodecylsulphate, followed by at least two washes in a solution comprising Na PO₄ 40 mM pH 7.2/EDTA 1 mM/SDS 1%, the final wash being conducted at 65°C for 5 minutes,

provided that said DNA or the complement of said isolated DNA is not IS1106 (accession number Z11857), *frpA*, *frpC*, *opc*, *porA*, and a gene involved in the biosynthesis of any one of the polysaccharide capsule, rotamase, said DNA encoding a peptide localized beyond the cytoplasmic membrane.

72. (Previously Added) An isolated DNA which is *Neisseria meningitidis* (Nm) specific and hybridizes on a Southern blot to a DNA sequence of Region 5 of Nm strain Z2491 and to a DNA sequence of MS11 and does not hybridize on a Southern blot to a DNA sequence of *Neisseria lactamica* (NI) strain NI8064, under the following hybridization conditions: 16 h at 65°C, with NaPO₄ 0.5 M, pH 7.2; EDTA-Na 0.001 M, 1%, 1% bovine serum albumin and 7% sodium dodecylsulphate, followed by at least two washes in a solution comprising Na PO₄ 40 mM pH 7.2/EDTA 1 mM/SDS 1%, the final wash being conducted at 65°C for 5 minutes, or the complement of said isolated DNA,

provided that said DNA or the complement of said isolated DNA is not *pilC*, a gene involved in the biosynthesis of any one of the polysaccharide capsule, IgA proteases, pilin, a protein which binds transferrin or lactoferrin or an opacity protein,

said DNA being within an islet involved in the colonization of the nasopharynx or invasion of the submucousal space or systemic dissemination.

73. (Currently Amended) The isolated DNA or complement of claim ~~70~~ 72 said DNA sequence of Region 5 hybridizing with a clone selected from the group consisting of B11, C29, C52, E34, C8, E2, B40, E59, E94, C47, E78, C45, E23 and E103.

74. (Previously Added) An isolated DNA which is *Neisseria meningitidis* (Nm) specific and hybridizes on a Southern blot to a DNA sequence of Region 5 of Nm strain Z2491 and does not hybridize on a Southern blot to a DNA sequence of *Neisseria gonorrhoeae* (Ng) strain MS11, under the following hybridization conditions: 16 h at 65°C, with NaPO₄ 0.5 M, pH 7.2; EDTA-Na 0.001 M, 1%, 1% bovine serum albumin and 7% sodium dodecylsulphate, followed by at least two washes in a solution comprising Na PO₄ 40 mM pH 7.2/EDTA 1 mM/SDS 1%, the final wash being conducted at 65°C for 5 minutes,

provided that said DNA or the complement of said isolated DNA is not IS1106 (accession number Z11857), *frpA*, *frpC*, *opc*, *porA*, and a gene involved in the biosynthesis of any one of the polysaccharide capsule, rotamase,

said DNA encoding a peptide localized beyond the cytoplasmic membrane.

75. (Previously Added) An isolated peptide encoded by a DNA sequence of claim 65.

76. (Previously Added) An isolated peptide encoded by a DNA sequence of claim 66.

77. (Previously Added) An isolated peptide encoded by a DNA sequence of claim 67.

78. (Previously Added) An isolated peptide encoded by a DNA sequence of claim 68.

79. (Previously Added) An isolated peptide encoded by a DNA sequence of claim 69.

80. (Previously Added) An isolated peptide encoded by a DNA sequence of claim 70.


81. (Previously Added) An isolated peptide encoded by a DNA sequence of claim 71.

82. (Previously Added) An isolated peptide encoded by a DNA sequence of claim 72.

83. (Previously Added) An isolated peptide encoded by a DNA sequence of claim 73.

84. (Previously Added) An isolated peptide encoded by a DNA sequence of claim 74.

85. (Previously Added) A composition comprising a DNA or complement of claim 65 and a carrier.

 86. (Previously Added) A composition comprising a DNA or complement of claim 66 and a carrier.

87. (Previously Added) A composition comprising a DNA or complement of claim 67 and a carrier.

88. (Previously Added) A composition comprising a DNA or complement of claim 68 and a carrier.

89. (Previously Added) A composition comprising a the DNA or complement of claim 69 and a carrier.

90. (Previously Added) A composition comprising a DNA or complement of claim 70 and a carrier.

91. (Previously Added) A composition comprising a DNA or complement of claim 71 and a carrier.

92. (Previously Added) A composition comprising a DNA or complement of claim 72 and a carrier.

93. (Previously Added) A composition comprising a DNA or complement of claim 73 and a carrier.

94. (Previously Added) A composition comprising a DNA or complement of claim 74 and a carrier.

95. (Previously Added) A composition comprising a peptide of claim 75 and a carrier.

96. (Previously Added) A composition comprising a peptide of claim 76 and a carrier.

97. (Previously Added) A composition comprising a peptide of claim 77 and a carrier.

98. (Previously Added) A composition comprising a peptide of claim 78 and a carrier.

99. (Previously Added) A composition comprising a peptide of claim 79 and a carrier.

100. (Previously Added) A composition comprising a peptide of claim 80 and a carrier.

101. (Previously Added) A composition comprising a peptide of claim 81 and a carrier.

102. (Previously Added) A composition comprising a peptide of claim 82 and a carrier.

103. (Previously Added) A composition comprising a peptide of claim 83 and a carrier.

104. (Previously Added) A composition comprising a peptide of claim 84 and a carrier.

105. (Previously Added) An isolated peptide encoded by an *Neisseria meningitidis* (Nm) specific DNA sequence obtainable by a subtractive technique comprising

hybridizing a Nm DNA population and a subtractive *Neisseria* strain DNA population, under the following hybridization conditions: 48 h at 55°C, with 30 mM N-hydroxyethyl)piperazine-N'-(3-propanesulphonic acid), 3mM EDTA, pH 8.0 and 1.2mM NaCl, wherein non- Nm specific DNA sequences in said Nm DNA population are subtracted from said Nm DNA population to produce an Nm specific subpopulation, amplifying Nm specific DNA sequences in said Nm specific subpopulation, and purifying said Nm specific DNA sequences,

provided that said DNA sequence is not IS1106 (accession number Z11857), *frpA*, *frpC*, *opc*, *porA*, *pilC*, a glutathione peroxidase encoding gene, and a gene involved in the biosynthesis of any one of the polysaccharide capsule, rotamase, IgA protease, pilin, a protein which binds transferrin or lactoferrin or an opacity protein.